Remarks

The specification has been amended to better clarify the described invention. No new matter has been added by this formalistic amendment.

Claim 5 has been amended to better clarify the claimed invention. No new matter has been added by this amendment.

1. Examiner Teleconference

On October 3, 2006, the undersigned spoke with Examiner Balasubramanian regarding the issuance of the present non-final office containing a single rejection – namely, a § 112, second paragraph rejection. When the undersigned indicated to the Examiner that it was the undersigned's understanding that the claims were already in a condition for allowance, the Examiner stated that the rejection was the result of a second examiner review of the claims. The undersigned would like to thank the Examiner for taking the time to discuss the rejection in greater detail.

2. Rejection under 35 U.S.C. § 112, second paragraph

Claims 1-16, 31, 32, 33, 43 and 44 are rejected as allegedly indefinite because the Office Action asserts that as defined in the specification, the variable R^3 "embraces a monovalent group while in the formula I, R^3 is depicted as a divalent group." The Office Action then contends that alkyl, alkoxy, thioalkyl, hydroxyalkyl and carboxyalkyl are monovalent groups only.

Applicants respectfully disagree with this rejection. MPEP 2173.05(a)(III) clearly states that an applicant is free to be his or her own lexicographer and may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings if the written description clearly redefines the terms (*Process Contraol Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999)).

In the definition section of Applicants' specification at paragraph [0185] of the published application, it is stated that the term

> " 'alkyl' refers to both linear and branched chain radicals of up to 12 carbon atoms, unless otherwise indicated, and includes, but is not limited, to methyl, ethyl, propyl, isopropyl, butyl, isobutyl, sec-butyl, tert-butyl, pentyl, isopentyl, hexyl, isohexyl, heptyl, octyl, 2,2,4-trimethylpentyl, nonyl, decyl, undecyl and dodecyl. "

In the above definition, "alkyl" is indicated as encompassing linear and branched chain radicals. There is no stated limitation anywhere in the specification regarding the scope of the term "radicals." Accordingly, one of ordinary skill in the art would interpret the term "radicals" to read broadly, *i.e.*, encompassing mono-radicals (*e.g.*, $-CH_3$), di-radicals (*e.g.*, $-CH_2-$), tri-radicals (*e.g.*, $-\overset{|}{C}H-$), *etc.*

As confirmation of this statement, Applicants have submitted for the Examiner's consideration a document relating to nomenclature of classes of organic compounds. More specifically, the document defines "radicals" as including "monovalent radicals," "divalent radicals" and "trivalent radicals." Specific examples of each class of compounds are shown. This document, which is an approximate reproduction of a selected section of the highly recognized text, A Guide to IUPAC Nomenclature of Organic Compounds (1993), clearly shows that di-radical (*i.e.*, divalent) species are encompassed by the term "radicals."

Under this nomenclature, "methyl" would be viewed as any single carbon radical, for example, $CH_3\cdot$ or $\cdot CH_2\cdot$; "ethyl" would be viewed as any two-carbon radical, for example, $\cdot CH_2CH_3$ or $\cdot CH_2CH_2\cdot$, *etc.* Accordingly, the recitation of exemplary carbon radicals in published paragraph [0185] includes both monovalent and divalent species. This submission by Applicants is further supported by paragraph [0158] in Applicants' published specification which indicates various specific divalent embodiments of R^3 that include $-CH_2-$, $-CH_2CH_2-$, $-CH(CH_3)-$, $-C(CH_3)_2-$, *etc.*

Thus, based on both intrinsic evidence (*i.e.*, selected sections of Applicants' specification as recited above) and extrinsic evidence (the above-submitted nomenclature document that demonstrates what would have been common knowledge to a person of ordinary skill in this art at the time of filing of the subject application), the definition of "alkyl" as set forth by Applicants clearly encompasses monovalent and divalent functional groups.

Similarly, the definition of "alkoxy" is indicated in published paragraph [0197] as "straight or branched chain radicals of up to 12 carbon atoms, unless otherwise indicated, bonded to an oxygen atom." Given that "alkyl," as discussed above, encompasses di-radical moieties, alkoxy would then be considered to encompass mono-radical and di-radical chains that contain an oxygen atom. "Methoxy," "ethoxy," "propoxy," *etc.* are listed as exemplary alkoxy moieties. As such, "methoxy" would be viewed, for example, as $\cdot OCH_3$ or $\cdot OCH_2\cdot$; "ethoxy" would be viewed, for example, as $\cdot OCH_2CH_3$ or $\cdot OCH_2CH_2\cdot$, *etc.* Identical reasoning would apply in determining the scope of the defined terms "thioalkyl," "hydroxyalkyl" and "carboxyalkyl."

In summary, Applicants submit that as defined in the specification, the term "alkyl," appearing either alone or in combination with, for example, the prefixes "thio" or "hydroxy" or "carboxy," implies monovalent as well as multivalent moieties. This interpretation is supported at the least by a well-recognized document directed to organic chemistry nomenclature. Applicants therefore respectfully request that this rejection be withdrawn and the claims found to be in a condition for allowance.

3. Conclusion

Upon consideration of the foregoing, it will be recognized that Applicants have fully and appropriately responded to the Examiner's rejections. Accordingly, all claims are believed to be in proper form in all respects and a favorable action on the merits is respectfully requested. Should the Examiner feel that there are any issues outstanding after consideration of this amendment, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

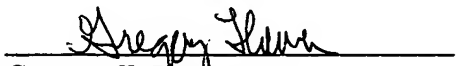
Except for issue fees payable under 37 C.F.R. 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. This paragraph is intended to be a **constructive petition for extension of time** in accordance with 37 C.F.R. 1.136(a)(3).

Respectfully submitted,

Dated: **October 19, 2006**

Morgan, Lewis & Bockius LLP

Morgan, Lewis & Bockius LLP
Customer No. **09629**
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel: 202-739-3000
Fax: 202-739-3001



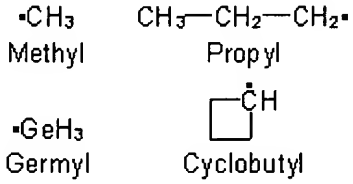
Gregory T. Lowen
Registration No. 46,882
Direct: 202-739-5915

Specific Classes of Compounds

R-5.8.1 Radicals

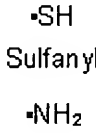
R-5.8.1.1 ***Monovalent radicals.*** A radical formally derived by the removal of one hydrogen atom from any of the mononuclear parent hydrides of the carbon family of elements, or from a terminal atom of a saturated unbranched acyclic hydrocarbon, or from any position of a monocyclic hydrocarbon ring is named by replacing the "-ane" ending of the systematic name of the parent hydride by "-yl".

Examples to R-5.8.1.1

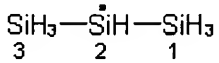


A radical formally derived by the removal of one hydrogen atom from any position of any other parent hydride, is named by adding the suffix "-yl" to the name of the parent hydride, eliding the final "e" of the name of the parent hydride, if present.

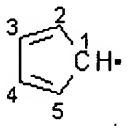
Examples to R-5.8.1.1



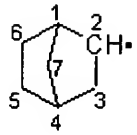
Azanyl
Aminyl
(traditional name: amino)



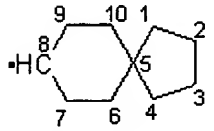
Trisilan-2-yl



Cyclopenta-2,4-dien-1-yl



Bicyclo[2.2.1]heptan-2-yl



Spiro[4.5]decan-8-yl

Note: As exceptions, the names of the radicals HO• and HOO• are "hydroxyl" and "hydroperoxyl", respectively.

R-5.8.1.2 ***Divalent and trivalent radicals.*** Divalent radical centres formally derived by removal of two hydrogen atoms from the mononuclear parent hydrides CH4, NH3, and SiH4 may be named respectively "methylene" or "carbene"; "azanylidene", "nitrene", or "aminylene"; an "silylene". Derivatives of these parent hydride radicals are named substitutively.

Note: The use of these names does not imply a specific electronic configuration. If needed, such a distinction should be made by using a separate word or descriptive phrase, such as singlet and triplet.

Examples to R-5.8.1.2

$(C_6H_5)_2\dot{C}$ and/or $(C_6H_5)_2C$:

Diphenylmethylene (preferred)
Diphenylcarbene

$CH_3—\dot{N}$ and/or $CH_3—N$:

Methylazanylidene
Methylnitrene
Methylaminylene

$C_6H_5—CH_2—\dot{S}iH$ and/or $C_6H_5—CH_2—CH_2—\ddot{S}iH$

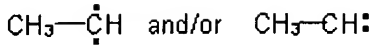
Benzylsilylene

$CH_3—CO—\dot{N}$ and/or $CH_3—CO—N$:

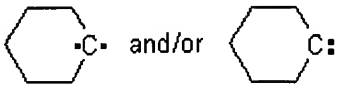
Acetylazanylidene
Acetylnitrene
Acetylaminylene

Other bivalent radical centres and trivalent radicals centres formally derived by removal of two or three hydrigen atoms from the same skeletal atom of a parent hydride may be described by adding a suffix "-ylidene" or "-ylidyne" following the procedure prescribed above for the suffix "-yl" (see R-5.8.1.1).

Examples to R-5.8.1.2



Ethylidene

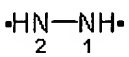


Cyclohexylidene

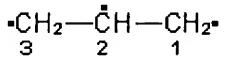
Bicyclo[2.2.1]hept-5-en-2-ylidene

Polyradicals containing two or more radical centres, formally derived by the removal of two or more hydrogen atoms from each of two or more different skeletal atoms of a parent hydride, are named by adding to the name of the parent hydride combinations of the suffixes "-yl" for a monovalent radical centre, "-ylidene" for a divalent radical centre, and "-ylidyne" for a trivalent radical centre, together with the appropriate numerical prefixes indicating the number of each kind of radical centre. The final "e" of the name of the parent hydride, if present, is elided when followed by the letter "y".

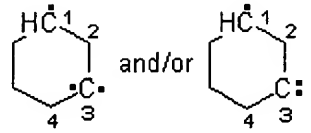
Examples to R-5.8.1.2



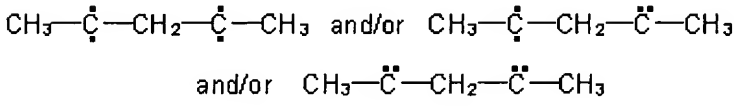
Diazane-1,2-diyl
Hydrazine-1,2-diyl



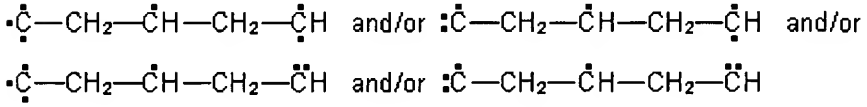
Propane-1,2,3-triyl



Cyclohexan-1-yl-3-ylidene



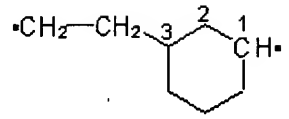
Pentane-2,4-diylidene



Pentan-3-yl-1-yliden-5-ylidyne

The presence of a radical centre in a substituent to be cited as a prefix is expressed by the prefix "ylo-" denoting the removal of a hydrogen atom.

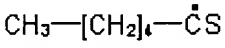
Example to R-5.8.1.2



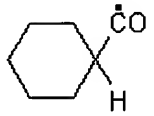
3-(2-Yloethyl)cyclohexyl

R-5.8.1.3 ***Radical centres on characteristic groups.*** Acyl radicals, i.e., radicals with at least one chalcogen or nitrogen atom attached to the radical centre by a (formal) double bond, which may be considered to be formally derived by the loss of the hydroxy group from acid characteristic groups, are named by replacing the "-ic acid" or "-carboxylic acid" ending of the name with "-yl" (occasionally "-oyl") or "-carbonyl". Alternatively, acyl radicals may be named on the basis of an appropriate parent hydride using prefixes such as "oxo-", "thioxo-", "imino-", etc.

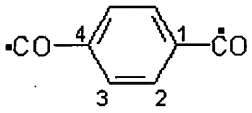
Examples to R-5.8.1.3



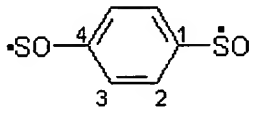
Hexanethioyl
1-Thioxohexyl



Cyclohexanecarbonyl
Cyclohexyloxomethyl



Terephthaloyl
1,4-Phenylenebis(oxomethyl)

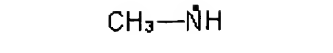


Benzene-1,4-disulfinyl
1,4-Phenylenebis(oxo-λ^4-sulfanyl)

Dimethylphosphinoyl
Dimethyloxo-λ^5-phosphanyl

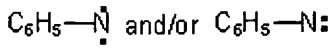
A radical derived formally by the removal of one or two hydrogen atoms from an amine, imine, or amide characteristic group may be named by adding a suffix "-aminyl", "-iminyl", or "-amidyl", to the name of the parent hydride for monovalent radicals and as a substituted nitrene for bivalent radicals. Alternatively, such radicals may be named substitutively on the basis of the parent hydride "azane".

Examples to R-5.8.1.3



Methanaminyl
Methylazanyl
(traditionally: methylamino)

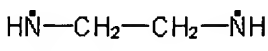
Formamidyl
Formylazanyl



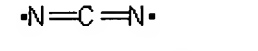
Phenylazanylidene
Phenylnitrene
Phenylaminylene

Polyradicals with radical centres identically derived located on two or more amine, imine, or amide characteristic groups are named by applying the principles for nomenclature of assemblies of identical units using the multiplicative prefixes "bis-", "tris-", etc.

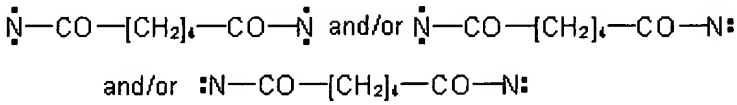
Examples to R-5.8.1.3



Ethylenebis(aminyl)
Ethylenebis(azanyl)



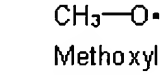
Methanediylidenebis(aminyl)
Methanediylidenebis(azanyl)



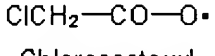
Hexanedioylbis(azanylidene)
Hexanedioylbis(nitrene)
Hexanedioylbis(aminylene)

A radical derived formally by the removal of the hydrogen atom from the hydroxy group of an acid or hydroxy characteristic group is named on the basis of a composite parent radical name formed by combining the appropriate prefix derived from the parent hydride or acid residue attached to the chalcogen atom with the term "oxyl", "peroxyl". etc.

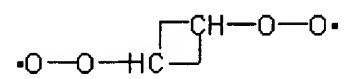
Examples to R-5.8.1.3



Methoxyl



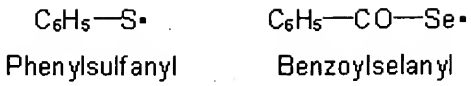
Chloroacetoxyl



Cyclobutane-1,3-diyldiperoxyl

Chalcogen analogues are named on the basis of parent radicals, such as "sulfanyl" and "selanyl".

Examples to R-5.8.1.3



Next:

R-5.8.2 Cations
R-5.8.3 Anions
R-5.8.4 Cationic and anionic centres in a single structure
R-5.8.5 Radical ions

SEARCH

Additional Nomenclature Resources:

- Explore IUPAC and CAS Nomenclature tools, such as Free IUPAC name generation and professional ACD/Name Software
- Look up structures of trivial and trade names with ACD/Dictionary
- New nomenclature software ACD/Name Chemist Version
- More resources for educators and students